UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

SE-5J

February 13, 2014

Mr. John Yang
GaiaTech
135 South LaSalle Street, Suite 3500
Chicago, Illinois 60603

R: 545 North McClurg Court (AKA 410 East Grand) Soil Screening and Soil Management Work Plan dated January 21, 2014

Dear Mr. Yang:

As you requested, USEPA has reviewed the above referenced work plan and provides the following comments:

Section 6.1.2 (General Procedures for Surface Soil Screening), Page 13, Paragraph 1

The document states: "The "hot spot" areas of the surface soil/fill contaminated with thorium will be covered by plastic sheeting and isolated with barricades and tapes." If plastic sheeting or tarps are not practicable, the application of a dust suppressant should be utilized instead. Please revise this paragraph and include the Material Safety Data Sheet (MSDS) of the dust suppressant in the Health and Safety Plan.

Section 6.2 (General Excavation Guidelines), Page 13, Paragraph 2

The document states: "Soils identified as containing fill materials that are in areas (onsite and ROW) defined as having proposed subsurface activities (e.g., installation of utilities or other building foundations or structures) with the location of surveyed areas being measured and recorded." Please clarify what is being stated here, it appears to be incomplete.

Section 6.2 (General Excavation Guidelines), Page 14, Paragraph 3

The document states: "A representative soil sample(s) will be collected in the area by the USEPA (or with USEPA oversight/approval) to quantify the concentration of radiological contamination (Section 11.0)." More than likely, U.S. EPA may either perform or oversee radiological gamma screening of a defined "hot zone" and would likely oversee collection of a

sample by the site radiological contractor. At U.S. EPA's discretion, it may collect a split sample of any sample collected by the site radiological contractor. Also, the text states "The analytical report and sample will then be forwarded to the USEPA for potential subsequent confirmatory analysis performed by USEPA's radiological laboratory." U.S. EPA would want the sample forwarded directly to NAREL and receive notification prior to and following shipment to NAREL. Please revise these sentences to incorporate this information.

The document states: "If required by certain conditions, the Super Sack containers may be placed in a metal shipping container(s) with metal integrated top, and temporarily stored onsite, pending off-site disposal in accordance with Section 8.0." Please discuss "certain conditions" that are expected.

The document states: "After removal of the fill contaminated with thorium, a verification soil sample(s) will be collected by the USEPA (or with USEPA oversight/approval) to confirm the impacted soils have been removed. If the analytical results of the verification sample(s) are below the threshold limit, the area will be released by the USEPA." The expectation is that the verification sample(s) will be collected by the USEPA (or with USEPA oversight/approval), provided to the site radiological contractor for analysis by their lab for interim verification (to support USEPA release with a verification release form) and then that sample would be submitted by the lab directly to NAREL for final verification analysis. The anticipated turn-around time for NAREL's analysis for final verification is typically 60 days. Please revise this section to incorporate these comments.

Section 7.1 (General Procedures for ROW and Street Soils) and other relevant sections should be revised appropriately consistent with the above comments.

Section 7.2.2 (Utility Installation), Page 19, Paragraphs 1 through 3
Reference is often made to "radiation surveying" – what is being performed is surveying for thorium contamination in soil. Please revise.

The document states: "Upon confirmation that radiation levels meet the designated 2 mrem/hr criteria, the General Construction Contractor or a specific trade will be able to install utilities as required and backfill the excavation without further environmental oversight." The need of the 2 mrem/hr criteria, and its relationship in comparison with the 7.1 pCi/g action level should be explained. Metal plating should be added as a suitable shielding material.

The document states: "If the General Construction Contractor will install the utilities at a later date, each of the utility trenches will be backfilled with "clean" sand or crushed stone to within 18 inches of the subsurface." More likely backfill with clean material will be performed to within 18 inches of the street or sidewalk surface grade as needed. Regarding the "remainder of

the excavation will be capped/paved with temporary concrete…" Is there an option to use metal plating to cover excavations temporarily? If so, please consider and revise if appropriate.

Section 9.0 (Health and Safety Plan), Page 22

The document provides the following definition for "identified radiologically contaminated soils" as: "Soils onsite, or in the ROW, which have been surveyed by a field technician, under the direction of a certified health physicist, using a calibrated hand-held gamma-ray detector and are found to be above the equivalent threshold limit value correlating 7.1 pCi/g total radium. Soils must also be quantified in a laboratory to contain total thorium above the USEPA Action Level of 7.1 pCi/g." Soils identified with calibrated hand-held gamma-ray detector to be above the equivalent threshold limit value correlating 7.1 pCi/g total radium should be considered to be "identified radiologically contaminated soils" unless confirmed to be otherwise as a result of laboratory analysis of a representative soil sample. Please revise this section.

Section 10.2 (Air Monitoring Activities) Page 23

Delete the sentence "USEPA guidelines will be used whenever feasible in establishing sampling locations, quality control, height of the sampling above the ground and sampling orientation.

Section 11.0 (Thorium Confirmation and Verification Sampling), Page 24, Paragraph 1

The document states that "Sampling will be conducted as follows: 1) to confirm suspected radiologically contaminated soils/fill; and 2) for verification that the soils/fill in excess of the Action Level has been removed." These activities should be covered in two defined sub-sections for clarity: confirmation sampling and verification sampling.

Section 11.0 (Thorium Confirmation and Verification Sampling), Page 24, Paragraph 2

The document states "After fill has been identified as containing thorium above Action Level of 7.1 pCi/g, the USEPA will be notified by telephone that an area with apparent soil impact was encountered." The notification should be via telephone and email to On-Scene Coordinator (OSC) Verneta Simon at (312)886-3601 and Simon.Verneta@epa.gov, and Superfund Health Physicist (HP) Eugene Jablonowski at (312) 886-4591 and Jablonowski.Eugene@epa.gov. Please revise.

The document states "Generally, the USEPA will then be present during the sampling to document that the fill/soils exhibiting the highest level of impact are collected for analysis." USEPA may be present at its discretion, and expects a representative sample of the volume of material that is elevated above the 7.1 pCi/g Action Level. Please revise.

The document states "The soils will then be placed in a large stainless steel bowl, mixed and sifted to remove the larger aggregate and fill materials." Sifting of the soils should be performed with a ¼-inch sieve to remove the larger aggregate and fill materials. Please revise.

The document states "The sample containers will have a USEPA seal placed on the jar." At USEPA discretion, the Marinelli sample containers will have a custody seal applied. Please revise.

Section 11.0 (Thorium Confirmation and Verification Sampling), Page 24, Paragraph 3

The document states "The PPE and cleaning towels will be disposed of with the contaminated soil in a Super Sack container for offsite disposal." Only contaminated PPE requires disposal with contaminated soil in a Super Sack. Please revise.

Section 11.0 (Thorium Confirmation and Verification Sampling), Page 24, Paragraph 5

The document states "It is understood that the USEPA reserves its authority to perform the radiological survey work and sample collection. The samples will undergo initial analysis by GaiaTech's radiological contractor's laboratory. After this initial analysis, the samples will be sent to the USEPA for potential subsequent analysis and confirmation by USEPA's radiological laboratory." The first paragraph of this section describes two types of sampling that will be conducted:

1) to confirm suspected radiologically contaminated soils/fill (confirmation); and
2) for verification that the soils/fill in excess of the Action Level has been removed (verification).

With regard to confirmation (#1 above), following initial analysis by GaiaTech's radiological contractor's laboratory, at USEPA's discretion, the sample may then be sent to USEPA NAREL for subsequent analysis and confirmation of elevated thorium contamination. With regard to verification (#2 above), following initial analysis by GaiaTech's radiological contractor's laboratory (to support submittal of the verification release form to USEPA), the sample will be sent to USEPA NAREL for subsequent analysis and verification of thorium remediation. At any time, at USEPA discretion, USEPA may collect a split of any sample collected for analysis by NAREL. Please revise.

Appendix F - Excavation and Backfilling Procedures with Chicago Office of Underground Coordination (Excavation Cross-sections)

The letter to Mr. Zenon Stuck (Chicago Department of Transportation) and the excavation and backfilling procedure is not dated, and should be unless its intended to be a draft for eventual submittal. Please state the size of the "smaller " bucket.

Health & Safety Plan Comments

Page iii, The Illinois Department of Nuclear Safety has been changed to the Illinois Emergency Management Agency – Division of Nuclear Safety. Please correct.

Section 1.0 (Scope of Plan), Page 1, Paragraph 2.

The document states that "This plan meets the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, and applicable subparts of OSHA 29 CFR 1926,1910 and 10 CFI-" – This sentence is incomplete, and the scope should include OSHA 29 CFR 1910.1096 (ionizing radiation) and applicable Illinois agreement state regulations as well. Please revise.

Section 2.1 (Health and Safety Coordinator), Page 2

There should be provisions to designate a site Radiation Safety Officer (RSO who is a CHP) with appropriate radiation health and safety responsibilities in the event that radioactive contamination is identified. The RSO or their appropriately experienced designee should be on-site to oversee all radiological assessment and radiological control program activities. Please revise.

Section 4.1 (Principal Contaminants - Known or Suspected), Page 4

Under "inhalation" the text states "Airborne dust containing heavy metal radionuclides." –Please review whether this would be better stated as "Airborne dust containing heavy metals and radionuclides" there and for other appropriate routes of exposure.

Page numbering of this H&S document stops after page 7,please continue page numbering.

Section 8.0 (Personal Protective Equipment), Page 14, Paragraph 1

The document states: "It is anticipated that most excavation activities in designated exclusion zones can be conducted in Level D personal protective equipment (PPE), with a contingency upgrade to Level C, based on the action levels listed in Section 7." USEPA generally agrees, but the document should elaborate on the action levels that would drive a Level C upgrade and reference Table 7-1.

Your work plan appears to incorporate the procedures applied during your previous work at 345 East Ohio, 355 East Ohio, and procedures developed by others performing projects in the Streeterville area. If contamination is identified at the property, then we anticipate that your client will enter into a Administrative Settlement Agreement on Consent (ASAOC) for the investigation and cleanup of the property and at that time USEPA will provide formal approval of the work plan. The ASAOC provides for work conducted in accordance with an approved plan and then, when the work is completed, USEPA will provide a formal notice of completion. Please notify me and Gene Jablonowski by email and telephone 48 hours before you begin radiological surveying. If you would like to further discuss any issue, please contact me at (312) 886-3601, or Eugene Jablonowski, Superfund Health Physicist at (312) 886-4591, and direct legal inquiries to Mary Fulghum, Associate Regional Counsel at (312) 886-4683 or Cathleen Martwick, Associate Regional Counsel at (312) 886-7166. We also would like the contact information for your project counsel, Mr. Daniel Swartzman.

Sincerely,

Verneta Simon

Verneta Simon, P.E.
On-Scene Coordinator

bcc: Mary Fulghum, C-14J
Charlie Gebien, SE-5J
Eugene Jablonowski, SMF-5J
Debbie Keating, SE-5J
Cathleen Martwick, C-14J
Susan Pastor, SI-7J